BEST PRACTICES TO PREVENT OUT OF SEQUENCE CONSTRUCTION ACTIVITIES

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STUDENT'S DECLARATION

I hereby declare that the work in this thesis is based on my original work except for quotations and citations which have been duly acknowledged. I also declare that it has not been previously or concurrently submitted for any other degree at Universiti Malaysia Pahang or any other institutions.

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ABSTRAK

Kelewatan dalam industri pembinaan bukan sesuatu yang terasing lagi. Masalah dan cabaran umum dalam projek pembinan adalah kelewatan pelaksanaan dan operasi. Salah satu punca kelewatan pembinaan adalah aktiviti pembinaan yang tidak mengikut urutan. Oleh itu, kajian ini dijalankan untuk mengenal pasti amalan yang sesuai untuk mengelakkan kerja yang tidak mengikut urutan di dalam projek pembinaan. Kaedah penyelidikan yang digunakan dalam kajian ini adalah wawancara individu dengan pengamal industri dari industri pembinaan. Penemuan kajian ini menunjukkan bahawa amalan yang paling ditonjolkan untuk menghalang aktiviti pembinaan yang tidak mengikut urutan terletak di pengurusan atasan dan pengurusan bawahan yang terlibat di dalam projek pembinaan itu sendiri.

ABSTRACT

Delays in the construction industry are not something alienated anymore. The common problems and challenges in construction project are delay in implementation and operation. One of the causes of construction delays are out of sequence construction activities. Therefore, this study is conducted to identify the feasible practices to prevent out of sequence in construction projects. The research method that is being used in this study is individual interviews with industry practitioners from the construction industry. The findings of this study have shown that the most highlighted practices to prevent out of sequence construction activities lie upon the upper management and lower management that involves in the construction project itself.

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CIDB	Construction Industry Development Board
OOS	Out of sequence

CHAPTER 1

INTRODUCTION

1.1 Introduction

The construction industry is a distinct sector of the economy which makes its direct contribution to economic growth like all the other sectors such as manufacturing, agriculture, tourism, entertainment, and services. It also provides the basis where the other sectors can grow, by constructing the physical facilities required for the production and distribution of goods also services. Therefore, it is clear that the industry or construction activities affect nearly every aspect of the economy and undoubtedly vital for its continual growth.

However, failure in the construction industry is inevitable. Delays are one of the biggest problems of the construction process in developing countries, as cause a negative effect on the projects (Pourrostam et al, 2012). Many research has been done in analyzing the cause and effect of delay in construction project but in this study, the scope of focus will be decreased and highlighted to the issues that contribute to construction delay which is out of sequence construction activities. The improvement of delay factor not only limited to technical factors but also factors in the project management perspective both from the aspects of processes involve and the influence of human attitudes, mentality, skills, and behavior (Hamzah et al, 2011). Therefore the prevention to the out of sequence construction activities will be analyzed in this study to cater to the issues.

Scheduling in project management is a process of listing a project's milestones, activities, and deliverables with project start and finish dates. It is a very important process because it helps the engineers and project management team to complete the project within the allocated time and budget. Meanwhile, out of sequence construction

activities is generally any activity that is in progress or has completed before its predecessor. It is a condition in which the originally planned, and probably most efficient and logical work sequence is interrupted and changed (Ibbs et al., 2017). It also a quiet familiar terms to project scheduler, project manager and project management team that involves scheduling work task at the initial of any construction project.

1.2 Problem Statement

The construction industry is a vast and wide industry, therefore it is common when something mass operating to have huge chances of issues to come on the surface. Plus, it involves many individuals, hierarchy and type of work where each has its response and mannerism. To set everything in place, the project management team will set up a standardized working method and project schedule. Construction management decisions are made based on schedules that are developed during the early planning stage of projects, yet many possible scenarios should be considered during construction (Daniel et al., 2009).

Changes on the original standard may lead to contractor or worker to skip a scheduled task plan to progress the work and move on with the schedule by continuing work efforts rather than suspending the task on the scheduled activity or demobilizing until the delay induced by the change is rectify. Out of sequence work during construction is a major cause of productivity losses, cost and schedule overruns, and quality decline, either directly or indirectly (Abotaleb, 2018). The next things that are influenced are project success and project productivity. For example, out-of-sequence performance can decrease productivity as a result of additional time expended on the task moving back and forth to it and also indirectly due to transporting employees, retraining employees, reorienting workers to the tasks skipped over, and completing or and correcting deficient work (Ibbs, 2017).

1.3 Research Objective

Generally, this research aims to find ways to solve issues regarding construction failure and will be focusing on practices to prevent out of sequence construction activities. Besides, this research will also study on the factors that are believe to be a challenge to implement the practices that could avoid out of sequence from happening.

Specifically, in response to the stated issues, this research intends to achieve the following objectives:

i. To identify the best practices to prevent out of sequence in construction activities.

ii. To study the challenges in implementing the practices

1.4 Research Question

In an effort to understand the technique or strategy to avoid out of sequence from occurring in the construction industry, few relevant and specific questions are being formed to address the research objective. The research questions that were used in this research are as follows:

i. What are the best practices to prevent out of sequence construction activities?

ii. What are the challenges to implement the practices?

1.5 Scope of the Study

The main focus of this research is to solve the occurring problem in the construction industry regarding ways to prevent out of sequence construction activities. This research also aims to identify the challenges arise in implementing the practices. To facilitate this research, the scope of this study is being narrowed down and will be focusing on the contractor from grade 5 and above listed in the Construction Industry Development Board (CIDB). The targeted population for this study is the Project Manager, Assistant Project Manager, Senior Project Manager, and the Scheduling and Planning Team of a construction company.

Project Manager is a person who has the most responsibility on the successful initiation of the project planning, design, execution, monitoring and controlling of a particular project. Besides that, we choose the project scheduling and planning team in view to the fact that the involvement of the project team is likely to play a crucial role and responsibilities in the implementation and execution of a project. This is because the project team's participation, motivation, capabilities, consistency, and adaptability

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